

भारत सरकार GOVERNMENT OF INDIA
रेल मंत्रालय MINISTRY OF RAILWAYS
(रेलवे बोर्ड RAILWAY BOARD)

No. 2017/50/CE-III/BR/FOB

11
New Delhi, dated 02.05.2023

Principal Chief Engineers,
All Zonal Railways.

Sub:- FOB inspection module in BMS.


Ref:- CPD/TMS/NR's letter No. 198-W/e-Gov/TMS/BMS/Estimate dated 27.06.2022.

As per Para No. 228 of IRWM, the FOB shall be inspected in detail once a year by SSE/Works and 1/5th every year on programme basis by ADEN. However, no detailed inspection proforma is available in IRWM. Accordingly, for detailed inspection of, FOB, a module has been included in the BMS-(Copies enclosed). It has already been advised by CPD/TMS/NR's letter No. 198-W/e-Gov/TMS/BMS/Estimate dated 27.06.2022 that FOB inspection has to be done only through module available in BMS. It has come to the notice of the Board that FOB inspections are not being carried out through FOB module of BMS. Now, it has been decided by the Board (MI) that in view of implementation of BMS having a detailed inspection module of FOB, the register used for inspection of FOB has been withdrawn and replaced by the FOB module of BMS. However, all old such registers must be preserved as a permanent record for reference.

This has been decided so as to streamline the process and make consistent decision making to avoid delays. A line of confirmation for the same may please be sent.

This has the approval of PED/Bridge/Railway Board.

DA:- As above.


(Niraj Kumar)
Executive Director Civil Engg./B&S
Ph. No.011-478-47571

- Copy to:- (i) Principal Executive Director/Infra-II/RDSO for kind information please.
(ii) CBEs/All Zonal Railways for information and necessary action please.

FOB Master

A. FOB Jurisdiction Details:

Division		ADEN	
Station/Yard		Section	
Location			
FOB No		Name of FOB	

Line(s) on Which FOB lies:

Main Line(s)				Yard Line(s)	
#	Section	Line	#	Station	Line
1.			1.		
2.			2.		
3.			3.		

Note: In view of non-uniform practices for FOB Number, following is suggested:

- If on Station/Yard: **FOB-[Station Code]-1/2/3** (1/2/3 is no. of FOB on that station)
- If on Section: **FOB(O)-[Nearby Station Code]-1/2/3** (O stands for FOB outside Yard/Station, 1/2/3 is no. of FOB)

B. FOB General Details:

1. Old Bridge Register no.			
2. Year of construction	• Yes • No	If No, usage by	• Railway Passengers • Outsiders • Both
3. Year of commissioning			
4. FOB connects platforms only			
5. Overall length of FOB (from end to end)	• Yes • No	If Yes, degree of skew	
6. FOB at skew to track below	• Yes • No	If Yes, degree of skew	
7. FOB girders at skew to column support	• Yes • No	If Yes, degree of skew	
8. Utilities such as water pipes, electric cables, S&T cables etc. carried on the FOB	• Yes • No	If Yes, degree of skew	
9. Infrastructures to Schedule of Dimensions exist	• Yes • No	If No, enter areas which can not be inspected	
10. All parts of the FOB, attached staircases, ramps and escalators are amenable to Inspection and Maintenance	• Yes • No	If Yes, enter location (line) and speed (kmph)	
11. Whether there is any Permanent Speed Restriction due to FOB	• Yes • No	Attach approved plan	• Provided on all lines • Partially Provided • Not Provided
12. The solar panels on the roof of FOB	• Yes • No	If electrified, availability of OHE protective screen	
13. If territory electrified			
14. Display Board indicating last inspection date and official responsible for it and his contact provided or not	• Yes • No		
15. Additional details (Details of structures constructed below FOB, arrangement for illumination, etc.)			

C. Span Details: (enter details for each component)

#	Span No	Span (m)	Line(s) Covered	Highest Rail Level	Level of Bottom Most Part of the Girder (m)	Min. Height of Bottom Most Part of Span above Rail Level (m)	Superstructure				Width of FOB (m)	Type of Deck	Whether FOB has Roof Covering	Details of Roof Covering (Type of Structure & Material Used)
							Type	Material of Construction	As per RDSO Std. Plan or Zonal HQ Approved Plan	GAD No.	No. of Girder			
								<ul style="list-style-type: none"> • Steel • Concrete • Composite 	<ul style="list-style-type: none"> • RDSO Std. Plan • Zonal HQ Approved Plan 				<ul style="list-style-type: none"> • Yes • No 	

D. Column Details: (enter details for each component)

#	Col. No.	Lies on PF	Platform & Line Details on Left Side of Column				Platform & Line Details on Right Side of Column				Type of Col.	Detail	Material of Const. of Col.	Foundation Details	Bearing Provided & Type	Bearing Details
			PF No.	Adjace -nt Line	Lateral Dist. from Center Line of Track (m)	Provision for Protection Measures/ Sacrificial Masts	PF No.	Adjace -nt Line	Lateral Dist. from Center Line of Track (m)	Provision for Protection Measures/ Sacrificial Masts						
		Yes				<ul style="list-style-type: none"> • Yes • No 				<ul style="list-style-type: none"> • Yes • No 						
		No														

E. Staircase/Ramp & Supporting Structure for Escalator/Lift (enter details for each component)

#	Category	Direction	Col. No.	Staircase/ Ramp/ Escalator/ Lift No. (auto generated)	Type of Steps	Width of Staircases/ Ramp/ Escalator/ Lift (m)	Height of Parapet/ Railing in Staircase/ Ramps/ Escalator (m)	Horizontal Distance of Face of Staircase/ Ramp / Escalator from Center of Track			Material of Construction of Supporting structure	Dtl.
								Left Side	Right Side			
								Applicable Distance (m)	Applicable Distance (m)			

F. History of FOB (any work done previously such as re-girdering, rehabilitation, extension, any unusual occurrence happened in past etc.)

G. Details of Last ADEN Inspection

Inspection Date		Inspecting ADEN	
Overall Condition	Good/Satisfactory		

H. Details of Last SSE/Works Inspection

Inspection Date		Inspecting SSE/Works	
Overall Condition	Good/Satisfactory		

I. Details of Last 3rd Party Inspection

Whether FOB identified for Third Party Inspection	Yes/No	Inspecting Authority	
Inspection Date		Upload Details	
Overall Condition	Good/Satisfactory		

J. Last Painting Date

Painting Date	
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K. File Upload: GAD, Completion Plan & Key Plan (Showing platforms, landings, tracks and other FOB)

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L. File Upload: Tourism Related Photographs

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FOB Inspection

FOB Location Details:

FOB No.		
Yard / Block Section	FOB Name	
	Location	

FOB Inspection Details:

Inspection Year			Date of Inspection		
Item			Condition		Remarks
1. General					
1. General condition of steelwork and painting			<ul style="list-style-type: none"> Good/Satisfactory Need Attention Not Applicable 		
2. General condition of roof and floor supporting members			<ul style="list-style-type: none"> Good/Satisfactory Need Attention Not Applicable 		
3. General condition of concrete in columns, girders, flooring			<ul style="list-style-type: none"> Good/Satisfactory Need Attention Not Applicable 		
4. General condition of Side railing			<ul style="list-style-type: none"> Good/Satisfactory Need Attention Not Applicable 		
5. Condition of OHE protective screen			<ul style="list-style-type: none"> Good/Satisfactory Need Attention Not Applicable 		
6. Condition of Roof sheet, its connections including gutters			<ul style="list-style-type: none"> Good/Satisfactory Need Attention Not Applicable 		

7. Condition of rain water drain pipe & its connections	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
8. Additional thickness of flooring with respect to design thickness or any other superimposed dead load such as cable pipe lines, water pipe line, etc. required to be removed	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
9. Vegetation growth on FOB or trees etc in the vicinity if they are infringing inspection and maintenance of FOB	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
10. Any other remarks		
II. Columns/Trestles including Foundation (enter inspection details for each component)		
Column: C-1		
1. Condition of protruded part of foundation above PF level/ ground level and its connection with columns	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
2. Condition of Anchor bolt and its connection with column base, column base along with riveted/welded base plate	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
3. Condition of main steel columns along with lacing/battens and bracings	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
4. Condition of Nut & Bolts/Rivets/Welding and gussets plates	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
5. Condition of painting / surface protection of structural steel sections	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
6. Bearings plates of FOB girder and its connection with trestle / column	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	

7. Condition of concrete column i.e. spalling, exposed reinforcement, and signs of corrosion and damage	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
8. Any other detail		

III. Main girders, Deck Slab & Floor (enter inspection details for each component)

Column: S-2

1. Condition of main girder/members of truss	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
2. Condition of connections, gussets, splice joint, diaphragm and cross bracings etc.	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
3. Condition of nuts & bolts/rivets/welding in girder/truss/connections	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
4. Condition of cross girders, members supporting deck and their connection with truss	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
5. Condition of painting/surface protection of structural steel sections	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
6. Cracks, spalling, exposed reinforcement, and signs of corrosion and damage in concrete girders	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
7. Sag to be checked	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
8. Any other detail of main girder		

9. Condition of slab	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
10. Condition of flooring	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
11. Any other detail of slab		
12. Any other detail of flooring		
13. Any other defect in girder/slab/flooring	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
IV. Staircase/Ramp & Supporting Structure for Escalator/Lift (enter inspection details for each component)		
Staircase/Escalator/Lift: S-2		
1. Condition of girder (for staircase, ramp)	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
2. Condition of slab such as cracks, spalling, exposed reinforcement, damage etc. (for staircase, ramp, lift)	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
3. Structural condition of supporting structure (for staircase, ramp, escalator)	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
4. Condition of painting/surface protection of structural steel sections (for staircase, ramp, escalator)	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
5. Condition of other members such as nosing angle etc. (for staircase, ramp)	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	
6. Condition of hand rail (for staircase, ramp)	<ul style="list-style-type: none"> • Good/Satisfactory • Need Attention • Not Applicable 	

7. Any other detail	
Overall Condition	<ul style="list-style-type: none">• Good/Satisfactory• Need Attention/Repair• Need Replacement
SSE/Works for Compliance	
Upload Inspection Images (if any)	

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C. INSPECTION OF STRUCTURAL STEEL AND TIMBER WORK BY ASSISTANT ENGINEERS AND SUPERVISORS

✓ 228 Periodical Inspection -

a) Every structure on the Section/Sub-division shall be inspected in detail by the Section Engineer (Works)/Assistant Engineer as indicated below:-

	By Sectional Engineer (Works)	By Assistant Engineer
i) Structures such as workshops, running sheds, platform covers and foot over bridges	One a year during the prescribed months.	One fifth every year on a programme basis.
ii) Cast iron, wrought iron or pressed steel plate water tanks and stagings whether of steel sections or rails.	Once a year on a programme basis.	As required.
iii) Structures with roof trusses prescribed	Once a year during the of structures month.	10% to 20% test check inspection under each group.
iv) Other structures in which timber, rail or steel work is used to support any part of the structure.	-do-	-do-
v) Tie rods of arched roofs excluding jack arches.	-do-	-----
vi) Wrought iron or mild steel tanks on sleeper cribs at temporary watering station/kilometrages	-do-	----

b) The Section Engineer (Works) shall record results in ink in the structural steel and timber work inspection register in the form given in Annexure 2.9 and submit the same by the prescribed date to the Assistant Engineer who should scrutinise the entries, issue such orders as deemed necessary and

return the Register. Prompt action shall be taken to carry out repairs required.

The Section Engineer (Works) shall accompany the Assistant Engineer on the latter's inspection of structures carried out during the prescribed period.

c) The Assistant Engineer shall record results of his inspection in ink in the

Structural Steel and timber-work inspection register in form given in Annexure 2.9, maintained by Senior Engineer (Works) and ensure expeditious compliance of notes recorded.

d) Structures, the condition of which warrant special attention, should be inspected more frequently.

e) Entries in column "Condition of structure at the time of inspection" should be in the nature of statements. A defect, once mentioned, should not be omitted in future years unless it has been eliminated through repair in which case a note should be made to that effect.

f) When, during inspection of buildings, the Section Engineer (Works) notices the building to be unsafe for occupation he shall forthwith advise the occupant of the fact and also advise the Assistant engineer to get a notice issued to the occupant for vacation of the premises and to apprise the controlling officer of the occupant of the premises.

229 Details of Inspection - During inspection, the following points should receive attention:-

a) The condition of paint.

b) Whether any corrosion in steel or decay in timber is taking place.

In the case of steel work connected to masonry such as tie rods of arched buildings and roof trusses, whether any corrosion is apparent near the masonry.

The condition of welds, rivets, bolts and tie rods particularly of water storage tanks; cast iron tank plates should be examined for any cracks.

Whether any deformation of the structure has occurred.

Foundations and bearings with particular reference to tightness of anchor bolts.

The inspecting official shall make a thorough examination of every part of a structure in all respects, using ladders and scaffolding for examining portions beyond reach from the ground. If so considered necessary, the assistance of the Bridge staff may be requisitioned for the purpose.

230 Erection of Steel Work and Roof Trusses -

The assembly and erection of steel work for structures and roof trusses shall be carried out in accordance with approved plans and "methods of erection" as drawn up by the Engineer-in-charge and shall comply with the Indian Railway Standard Specification for "Steel structures (other than girder bridges)".

231 Maintenance of Roads :

Maintenance of roads needs careful planning. Though repairs like filling up of pot holes, resurfacing at broken patches, shall continue to be done as per the condition of the road at site, the tendency to carry out a routine resurfacing just to improve the outward look of the road should be avoided when it is noted that such resurfacing has, in the past, not been durable. Such a situation may be indicative of an inherent weakness in the

Office No. 1200142/2022 SM 8
Cepo AMCE

DD/CE-III
ED/CE/BS

4.07.2022

Northern Railway

PED/BS
PR ensure 250
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Headquarters Office,
Baroda House,
New Delhi.

Dated: 27.06.2022

No. 198-W/e-Gov/TMS/BMS/Estimate

Principal Chief Engineer(s),
All Zonal Railways.

Sub: Implementation of modified FOB Master, Inspection and Compliance Module in BMS Application.

FOB Module in BMS Application has been developed and implemented in December 2021 over IR. It has come to the notice that the same was not being used, as was not user friendly. Now the modules have been modified to make them simple and user friendly. The details of modules are as under:-

- Master Module including various images uploading facility.
- Inspection Module for ADEN and SSE/Works.
- Automatic Defect Generation and Compliance Module for SSE/Works.

As per Para 228 of IRWM, FOB has to be inspected by the SSE/Works every year and by ADEN every 5 year on programme basis. The same provision has been made in the BMS Application for the inspection module of FOBs for ADEN and SSE/Works.

The various reports for master data/inspection/defect and compliance would also be available by 10th July, 2022.

As per the details available, there are 4584 Numbers of FOBs over IR out of which master data have been entered for 3889 FOB so far. The Railway wise details of FOBs Master data is as under:

FOB Master Analysis (as on 27.06.2022)

SN	Railway	TOTAL FOB	FOB
1	Central Railway (CR)	374	290
2	East Central Railway (ECR)	286	242
3	East Coast Railway (ECoR)	246	227
4	Eastern Railway (ER)	490	223
5	North Central Railway (NCR)	189	185
6	North Eastern Railway (NER)	197	170
7	North Western Railway (NWR)	180	148
8	Northeast Frontier Railway (NFR)	245	233
9	Northern Railway (NR)	434	400
10	South Central Railway (SCR)	370	357
11	South Eastern Railway (SER)	257	213

12	South Western Railway (SWR)	194	161
13	Southeast Central Railway (SECR)	175	149
14	Southern Railway (SR)	420	420
15	West Central Railway (WCR)	133	77
16	Western Railway (WR)	394	394
	Total	4584	3889

You are requested to please advise all concerned to enter the Master Data of remaining FOBs as well as to update the existing data of FOBs as per revised /modified module.

It is also requested that all SSEs/Works and ADENs shall be advised to start using the Inspection Module from 1st July, 2022 onwards.

Message Centre is available in Help-Desk Menu of BMS Application to solve day to day queries of field users. For any further clarification following official may be contacted.

Shri D.K. Sharma	GM/CEP-IV/CRIS	Mob.: 9650444908, 8595944404
Shri Anisur Rehman	CE/TMS	Mob.: 9717630221
Shri Munendra Singh	SPE/CRIS	Mob.: 8130797611

The training through VC to Zonal Railways for this modified FOB module will be conducted by the CRIS on 30th June, 2022. The link and time will be advised.

ACHAL
JAIN

Digitally signed
by ACHAL JAIN
Date: 2022.06.27
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(ACHAL JAIN)

Chief Project Director/TMS

Copy to:-

- 1) AMCE, Railway Board, New Delhi - 110001 for kind information please.
- 2) AM/L&A, Railway Board, New Delhi - 110001 for kind information please.
- 3) Managing Director/CRIS, Chanakya Puri, New Delhi-110021 for kind information please.